4.2.7.10 Waste Management

This section summarizes the impacts on waste management at RFETS under No Action and the phaseout of Pu storage. There is no spent nuclear fuel or HLW associated with Pu storage. Table 4.2.7.10–1 lists the projected waste generation rates and treatment, storage, and disposal capacities under No Action for 2005. Projections for No Action were derived from the most recent available environmental data, with the appropriate adjustments made for those changing operational requirements where the volume of wastes generated are identifiable. The projection does not include wastes from future, yet uncharacterized, environmental restoration activities. The projections for No Action could change depending on decisions resulting from the Waste Management PEIS. Facilities that would support the storage of Pu would treat and package all waste generated into forms that would enable staging and/or disposal in accordance with RCRA and other relevant statutes. Depending in part on decisions in waste-type-specific RODs for the Waste Management PEIS, wastes could be treated and disposed of onsite or at regionalized and centralized DOE sites. For the purpose of analyses only, this PEIS assumes that TRU and mixed TRU waste would be treated onsite to the current planning-basis WIPP WAC, and shipped to WIPP for disposal. This PEIS also assumes that LLW, mixed LLW, hazardous, and nonhazardous waste would be treated and disposed of in accordance with current site practice.

No Action Alternative

Under No Action, TRU, low-level, mixed residues, hazardous, and nonhazardous waste would continue to be managed at RFETS from the missions described in Section 3.8. Waste management activities at RFETS are categorized as regulatory compliance and project administration, waste minimization, waste treatment, waste storage, and waste disposal. Within each category of waste management activity, various wastes are handled according to waste type as defined by various DOE orders, as well as Federal and State regulations. Applicable permitting, treatment, storage, and disposal requirements are determined according to these waste types. Under No Action, RFETS would continue to store quantities of Pu in various forms. This storage would generate small quantities of TRU, low-level, hazardous, mixed, and nonhazardous wastes. The primary focus for waste management at RFETS would be the continued processing of existing wastes, transition of facilities, and environmental restoration. It is anticipated that the Pu storage mission would have minimal impact on the waste management program at RFETS. The plant has stored Pu since 1956 and is adequately equipped to manage the wastes from the storage mission using the existing waste management infrastructure. Waste generated by cleanup activities is expected to be much greater than wastes generated from continued storage of Pu. The impacts of the wastes generated as part of environmental restoration and D&D activities would be addressed in individual remedial action feasibility studies. The Rocky Flats Cleanup Agreement provides the legal enforcement framework for assessing the native and extent of contamination, determining the risks imposed by that contamination to workers, the public, and the environment; and implementing actions designed to remediate the contamination.

Transuranic waste would be treated and packaged to meet the current planning-basis WIPP WAC or alternative treatment level and then stored in one of the RCRA-permitted storage units pending approval of WIPP as a repository for these wastes. Assuming WIPP is determined to be a suitable repository for these wastes, pursuant to the requirements of 40 CFR 191 and 40 CFR 268, these wastes would be packaged in accordance with DOE and DOT requirements for transport to WIPP depending on decisions made in the ROD associated with the Supplemental EIS being prepared for the proposed continued phased development of WIPP for disposal of TRU wastes.

Low-level waste would be compacted whenever possible, packaged to meet the WAC of the NTS low-level disposal facility, and then shipped to NTS for disposal. Mixed LLW would be treated and disposed in accordance with the *RFETS Treatment Plan* that was developed to comply with the *Federal Facility Compliance Act*. Hazardous wastes would be collected and packaged in DOT-approved containers for shipment to offsite RCRA-permitted commercial treatment, storage, and disposal facilities. Solid nonhazardous wastes would be disposed in the onsite permitted landfill.

Table 4.2.7.10–1. Projected Waste Management Under No Action (2005) at Rocky Flats Environmental Technology Site

Category	Annual Generation (m^3)	Treatment Method	Treatment Capacity (m^3/yr)	Storage Method	Storage Capacity (m^3)[a]	Disposal Method	Disposal Capacity (m^3)
Transuranic							
Liquid	<1	Solidification	149,000[b]	None	None	NA	NA
Solid	1, 583	Compaction	4,630[c]	Drums on pads	6,220[d]	WIPP or alternate facility	NA
Mixed Transuranic							
Liquid	<1	Solidification	Included in TRU liquid	None	None	NA	NA
Solid	1,505	Compaction	Included in TRU solid	Drums on pads	Included in solid TRU	WIPP or alternate facility	NA
Low-Level							
Liquid	<1	Evaporation and solidification	Included in liquid mixed LLW	Staged	105[e]	NA	NA
Solid	701	None	5,600[f]	Staged	4,540[e]	Offsite	NA
Mixed Low-Level							
Liquid	None[g]	Solidification	47,500[h]	Staged for treatment	Included in solid mixed LLW	NA	NA
Solid	6,019	None	7,100[i]	DOT containers	17,700[j]	Offsite	NA
Hazardous							
Liquid	<1	Neutralization & precipitation	None	Staged in DOT containers	Included in solid hazardous	Offsite	NA
Solid	25	None	None	Staged in DOT containers	260[k]	Offsite	NA
Hazardous (Residues)		None	None				
Liquid	None	None	None	Staged only	Included in liquid hazardous	Offsite	NA
Solid	None	None	None	Staged only	Included in liquid hazardous	Offsite	NA
Nonhazardous (Sanitary)							
Liquid	457,600[l]	Sedimentation	565,000	None	None	Surface water	NA
Solid	11,400	None	None	None	None	Onsite landfill	Expandable[m]

Table 4.2.7.10–1. Projected Waste Management Under No Action (2005) at Rocky Flats Environmental Technology Site—Continued

Category	Annual Generation (m^3)	Treatment Method	Treatment Capacity (m^3/yr)	Storage Method	Storage Capacity (m^3)[a]	Disposal Method	Disposal Capacity (m^3)
Nonhazardous (Other)							
Liquid	Included in sanitary	Sedimentation	Included in sanitary	None	None	Surface water	NA
Solid	73	None	None	None	None	Onsite landfill	Expandable[l]

[a] Additional storage capacity requirements depend upon the existing storage requirements, existing storage capacity, and existing permit conditions.
[b] Value taken from Draft Waste Management PEIS and includes Process Waste Treatment Facility and Organic and Sludge Immobilization System.
[c] Value taken from Draft Waste Management PEIS and includes Supercompaction and Repackaging Facility, Advance Size Reduction Facility, and Size Reduction Vault.
[d] Value taken from Draft Waste Management PEIS and includes the current TRU inventory and the projected 20-year generation.
[e] Cumulative volume of LLW stored at end of 1993 as per a Memorandum from McGlochlin, EG&G to Reece, DOE on updated information for Nonnuclear Consolidation EA.
[f] Value taken from Draft Waste Management PEIS and reflects compaction activities.
[g] No waste in this category is expected to be generated in 2005. Treatment, storage, and disposal are expected to continue for waste generated from past activities.
[h] Based on the operating capacities of Building 374 and 774 as described in the 1995 Mixed Waste Inventory Report.
[i] Based on the operating capacities of Building 776 as described in the 1995 Mixed Waste Inventory Report. Value calculated using the conversion ratio of 1,500 kg/m^3.
[j] Value taken from Draft Waste Management PEIS and reflects Mixed Waste container storage activities.
[k] Value based on the 1991 Waste Storage Inventory Report and the Memorandum from McGlochlin, EG&G to Reece, DOE on updated information for Nonnuclear Consolidation EA.
[l] Value taken from 1993 *RFETS Site Environmental Report* and reflects Annual Discharge from main collection pond (Pond A-4).
[m] Landfill will provide additional 20 years of capacity.
Note: NA=not applicable.
Source: DOE 1995cc; DOE 1995gg; RF EG&G 1992e; RFETS 1994a; RFETS 1995a:1; RFP 1993a:1; RFP 1993a:2.

Preferred Alternative

Phaseout

[Text deleted.] The small amount of waste associated with Pu storage would no longer be generated, but the total wastes generated at RFETS could increase as a result of the cleanup activities of facilities formerly used for Pu storage.